



# Harsco Track Technologies

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## SERVICE BULLETIN

### MAINTENANCE OF WAY EQUIPMENT

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**DATE:** 10 - 2003

**BULLETIN NO:** 03-023

**TITLE:** 201672 Vehicle Frame Reinforcement Group

**RATING:**



**ALERT**  
(Potential Problem)



**INFORMATION**  
(Action Is Optional)



**DIRECTIVE**  
(Action Is Required)



**PRODUCT IMPROVEMENT**  
(Enhance Product)

**PRODUCT SERIES / MODEL:** All 1996 - 1999 Chevrolet 2500HD vehicles equipped with Series 0307, HR0307 Series A or HR0307 Series B HY-RAIL® Guide Wheel Equipment.

**SERIAL NO:** Not Applicable

**SUMMARY:** Several reports have been received of cracks developing on the front of the frame, near the radiator mounts, on 1996 - 1999 Chevrolet 2500HD vehicles equipped with Series 0307, HR0307 Series A or HR0307 Series B HY-RAIL® Guide Wheel Equipment.

**OPERATIONAL IMPACT:** To identify, repair and prevent spreading of any cracks in the vehicle frame.

**ACTION:** Use this information to inspect the vehicle frame for cracks and take appropriate action if cracks are found or are not found.

**CONTACT:** If you have any questions or if we can be of any service, please contact the HY-RAIL® Guide Wheel Equipment Department at the Fairmont, MN facility (507) 235-7112.

#### Safety Information



- FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURE TO DISABLE ENERGY SOURCES WHEN PERFORMING MAINTENANCE, MAKING ADJUSTMENTS OR REPAIRS TO THE VEHICLE OR EQUIPMENT. FAILURE TO HEED THIS WARNING COULD RESULT IN SEVERE BODILY INJURY.

## Frame Inspection

1. Inspect the vehicle frame. Follow the inspection instructions outlined in Harsco Track Technologies Service Bulletin 03-022.
2. If no cracks or indications of developing cracks are present continue with normal operation. At the next service have the diagonal cross braces installed. See Cross Brace Installation Instructions.
3. If cracks are evident, immediately take the vehicle out of service. Take the vehicle to a repair shop and have the cracks in the frame repaired and the diagonal cross braces installed. See the following Frame Repair Instructions and Cross Brace Installation Instructions.

## Frame Repair Instructions

*Note: This is a general guide only. Some vehicles may need special repair considerations. Contact Harsco Track Technologies if there are any questions.*

1. Remove the guide wheel unit and mounting brackets from the vehicle. Inspect the guide wheel unit and mounting brackets for worn or damaged components. Repair or replace as necessary.
2. Measure and record the distance from top of vehicle frame to bottom of radiator. If possible, block the radiator up in this position. Remove the fasteners that secure the radiator to the radiator mount.
3. Remove the radiator mounts from the right and left frame rails. Mark them as left or right when removing them from the frame rails.
4. Grind off the old welds on the frame rails where the radiator mounts were located. If the tubular ends of the frame are bent, straighten the bent areas back to their original shape.
5. Grind a V-shape in all cracks to ensure weld penetration. Drill a 3/16" diameter hole at the end of each crack. Using appropriate welding procedures, weld the cracks taking care to include the drilled holes at the end of cracks. Use mild steel welding electrodes such as E6010/11/12 or E7014/18 or equivalent. Make sure the weld penetration is through to the inside of the frame. After welding the cracks, grind the welds flush to the frame surfaces.

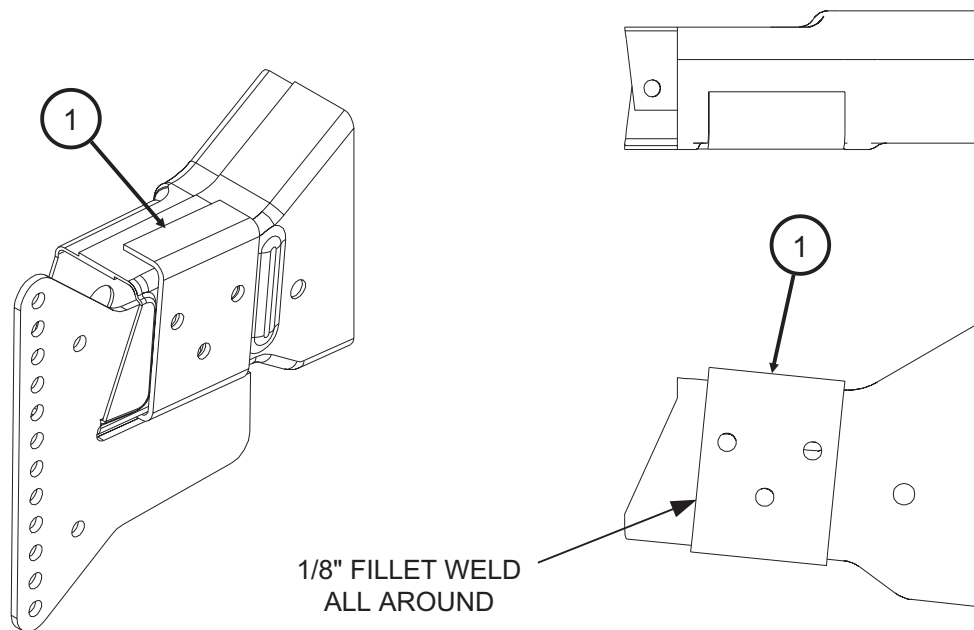
See Figure 1.

6. The left frame rail is shown. The right frame rail will be similar. The supplied reinforcing U-shaped plate (1) is made of ASTM A36 steel. Place reinforcement plate (1) on outside of frame as shown. Make sure the two holes and the 1-5/8" tab are towards the top of the frame. Line the holes in the plate up with the existing holes in the frame rail. Install the guide wheel unit mounting bracket (A). Bolt reinforcement plate (1) and guide wheel unit mounting bracket (A) to the vehicle frame using the proper size and length of fasteners.

## Frame Repair Instructions

7. Using appropriate welding procedures, weld the reinforcement plate (1) to vehicle frame. Use mild steel welding electrodes such as E6010/11/12 or E7014/18 or equivalent. Make sure to have at least a 1/8" fillet weld all around the edges of the reinforcing plate (1).
8. Repeat Steps 6 and 7 for the right frame rail.
9. After the welds have cooled, remove the fasteners and the mounting brackets.

FIGURE 1  
REINFORCEMENT PLATE APPLICATION



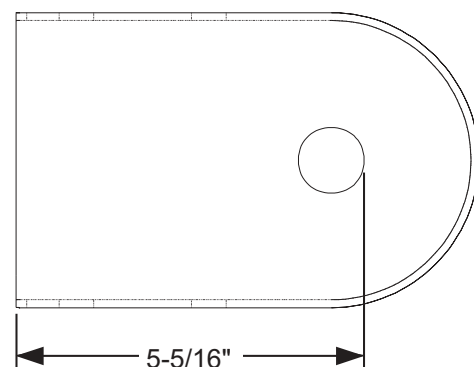
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## Frame Repair Instructions

See Figures 2, 3 and 4.

10. End plates (2) are made of ASTM A36 steel. Bolt the end plates (2) to the outside of the reinforcing plates (1) on the vehicle frame using the proper size and length of fasteners.
11. Cut the radiator mounts that were removed in Step 2 to the dimension shown in Figure 2. The radiator mounts will be welded to the end plates (2) to form new radiator mounts.
12. Make sure the radiator is at the correct height as measured in Step 2. Hold the left radiator mount in position on the end plate bolted to the left frame rail. Make sure the radiator mount holes are in alignment with the radiator. Tack weld the radiator mount to the end plate.
13. Repeat Step 12 for the right radiator mount.
14. Remove the tack welded plate and radiator mount from the frame rails.
15. Using appropriate welding procedures, weld the end plate (2) to the radiator mount. Use mild steel welding electrodes such as E6010/11/12 or E7014/18 or equivalent. Make sure to have at least a 1/8" fillet all around the edges of the radiator mount.
16. After the welds have cooled, bolt the radiator mount and the mounting brackets to the frame rails using the proper size, grade and length of fasteners. All fasteners must have at least two full threads of the bolt extending beyond the end of the nut. Refer to the appropriate HTT Front Application Drawing for the vehicle to determine the proper fasteners to use and for the installation instructions. Application drawing numbers can be found in Section 7 - Parts or Section 8 - Vehicle Applications in the Operator's Service and parts Manual supplied with the guide wheel unit. If the appropriate application drawing is not listed for your vehicle, contact Harsco Track Technologies at the number shown on page one of this Service Bulletin.
17. Again, make sure the radiator mount holes are in alignment with the radiator. Using appropriate welding procedures, weld the modified radiator mounts to the vehicle frame rails. Use mild steel welding electrodes such as E6010/11/12 or E7014/18 or equivalent. Make sure to have at least a 1/8" fillet weld all around the edges of the modified radiator mount.
18. Using the existing fasteners bolt the radiator to the modified radiator mount.

FIGURE 2  
RADIATOR MOUNT  
TOP VIEW



Frame Repair Instructions

FIGURE 3  
MODIFIED RADIATOR MOUNT APPLICATION

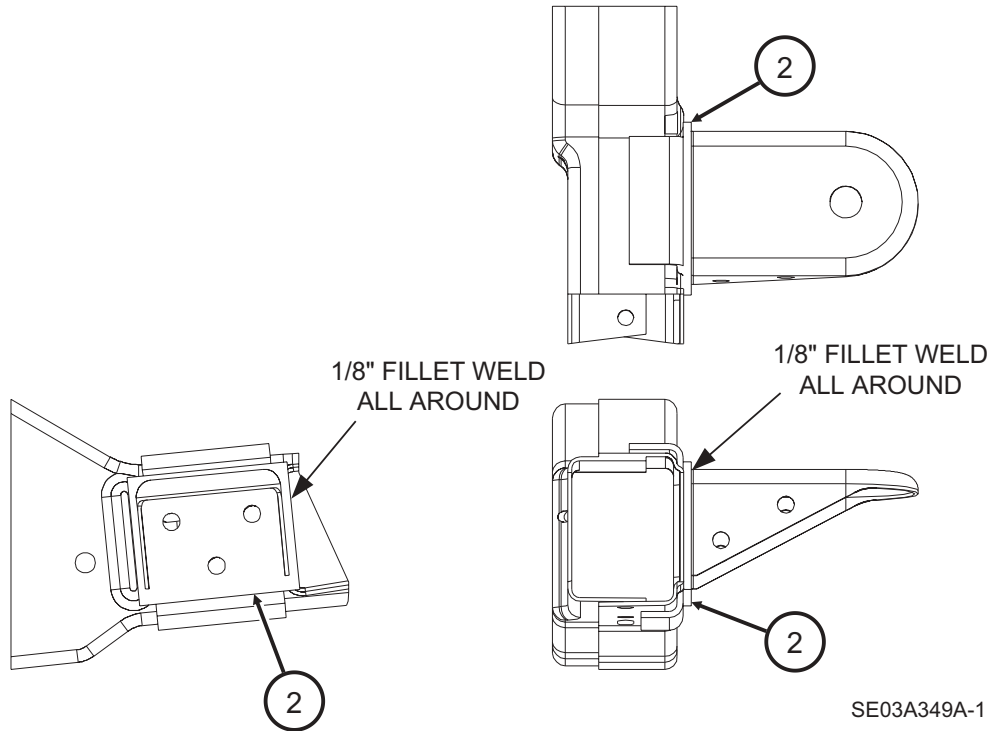
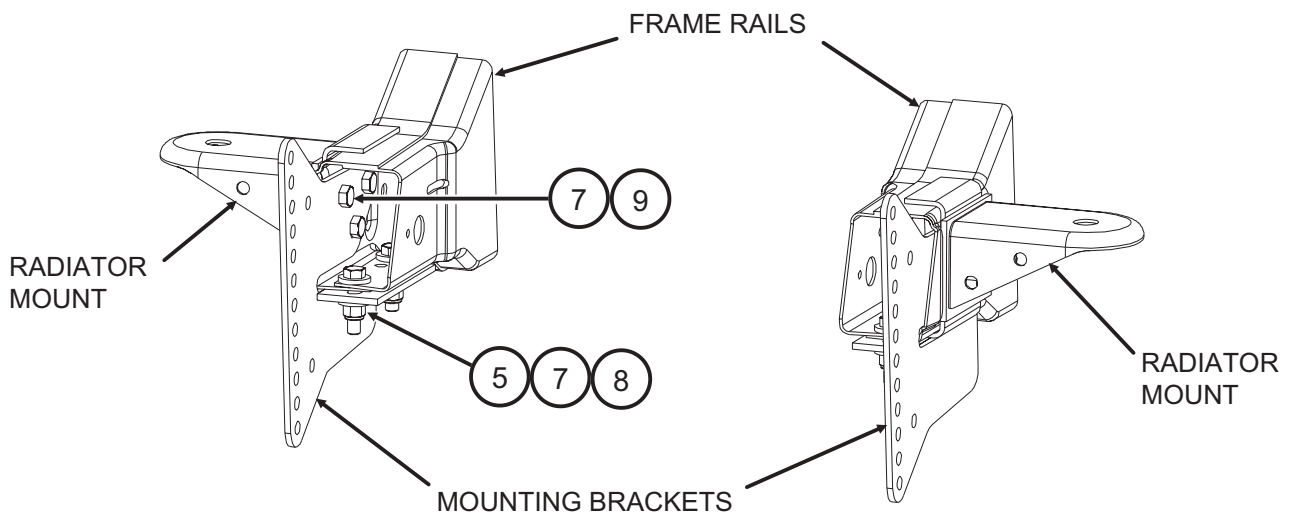


FIGURE 4  
FRAME, RADIATOR MOUNT AND MOUNTING BRACKETS

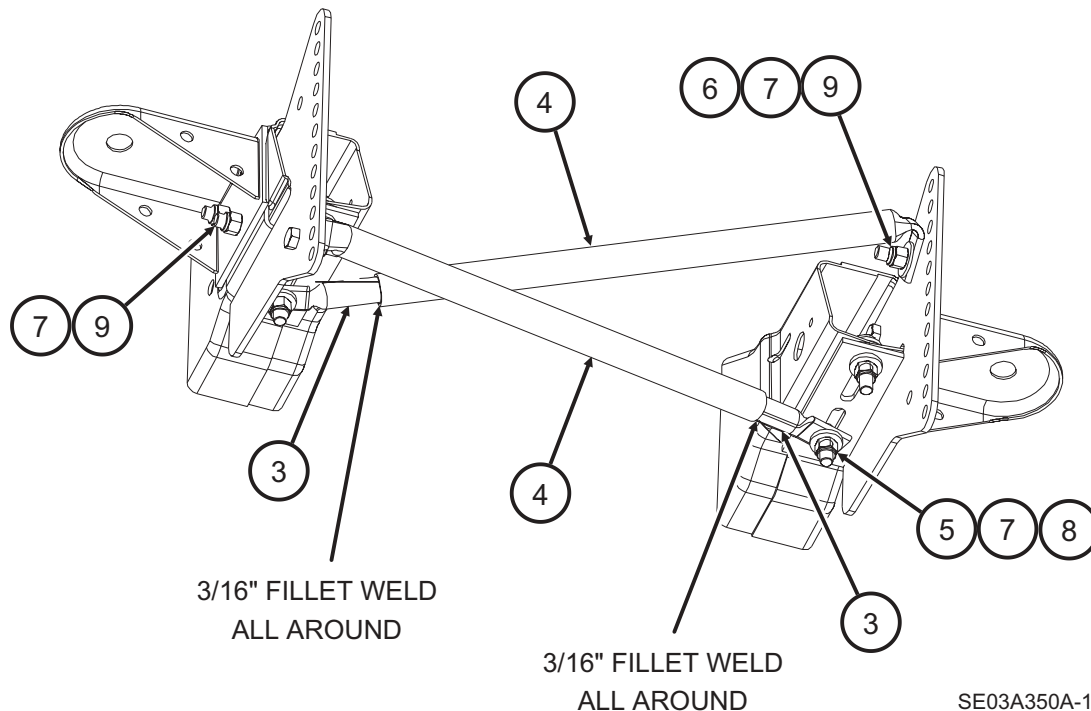


## Cross Brace Installation

See Figure 5.

1. Install the two piece diagonal cross braces as show in Figure 5 using the existing mounting holes. One half of the diagonal cross brace is item (3) and the other half is item (4).
2. Mount the braces using existing holes. Attach one end of the two piece diagonal cross brace from the bottom of the right mounting bracket diagonally up to the rear hole of the left vehicle frame tube mounting bracket.
3. Attach the second two piece diagonal cross brace from the top of the left mounting bracket diagonally down to the rear hole of the right vehicle frame tube mounting bracket.
4. Using appropriate welding procedures, weld diagonal cross braces together at their telescoping intersection. Use mild steel welding electrodes such as E6010/11/12 or E7014/18 or equivalent. Make sure to have at least a 3/16" fillet weld all around the cross brace intersection point.

FIGURE 5  
CROSS BRACE INSTALLATION



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## Guide Wheel Unit Installation

1. Install the guide wheel unit on the mounting brackets. Refer to the appropriate HTT Front Application Drawing for the vehicle to determine the proper fasteners to use and for the installation instructions. Application drawing numbers can be found in Section 7 - Parts or Section 8 - Vehicle Applications in the Operator's Service and parts Manual supplied with the guide wheel unit. If the appropriate application drawing is not listed for your vehicle, contact Harsco Track Technologies at the number shown on page one of this Service Bulletin.
2. Torque all fasteners to the recommend torque specifications shown on the application drawing or to the bolt torque charts found in Appendix A of the Operator's Service and parts Manual supplied with the guide wheel unit.
3. Align the guide wheel unit. See the Guide Wheel Unit Alignment Procedure in the Operator's Service and parts Manual supplied with the guide wheel unit.
4. Track test the vehicle to ensure proper alignment of the guide wheel equipment.

## 201672 Vehicle Frame Reinforcement Group

ITEM	PART NO	DESCRIPTION	QTY
	201672	VEHICLE FRAME REINFORCEMENT GROUP .....	1
1	201665	Reinforcement Plate .....	2
2	201666	End Plate .....	2
3	163634	Brace End .....	2
4	163636	Brace End .....	2
5	072897	Washer .....	8
6	F001267	Wrought Washer, 1/2" .....	2
7	F013500	Elastic Stop Nut, 1/2"-13 .....	12
8	F018861	Cap Screw, 1/2-13 x 2-1/4" GR 8 Hex Hd. ....	4
9	F023674	Cap Screw, 1/2-13 x 1-3/4" GR 8 Hex Hd. ....	8

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